Introduction

The purpose of this alignment is to facilitate educators' ability to implement an engaging mathematics curriculum. The **Michigan Mathematics Grade Level Content Expectations**, provided here, do not supplant the Content Standards and Benchmarks - they are the 3rd tier of the *Michigan Curriculum Framework (MCF)*. These alignment documents are a resource tool to ensure that the richness of the curriculum is not lost by focusing solely on the expectations.

The MCF K-8 alignment document for mathematics is divided into two documents: a K-4 document that aligns the K-4 expectations with the MCF elementary benchmarks and a 5-8 document that aligns the 5-8 expectations with the MCF middle school benchmarks.The documents are organized in tables, each of which represents a content standard. The tables' left hand column provides the benchmarks for each standard. Grade levels are represented across the top. The expectations are placed in cells according to grade, and in alignment with the benchmark they are assessing. The "topics" with which they are associated are listed in bold in the cells as well, and serve to show continuity across the grades. Some benchmarks have no expectations aligned to them; others have several. However, all benchmarks are important to the development of students' understanding of the curriculum.

The arrangement of the "domains within the Grade Level Content Expectations is important. The "domains" (listed elsewhere in the document) are conceptual and hierarchical groupings of the expectations. In many cases a content standard and/or benchmark has one or two "domains" represented by the expectations. By using all 3 tiers, educators are provided insight into the level of cognitive processes needed to fully understand important mathematics concepts.This document can also be used to cross-reference the expectations back to *MiCLiMB*, another important resource to understanding and implementing the *Michigan Curriculum Framework*.

MICHIGAN Department of Education
Office of School Improvement
www.michigan.gov/mde

Domains

NUMBER AND OPERATIONS

- **ME** **Meaning, notation, place value, and comparisons**
- **MR** **Number relationships and meaning of operations**
- **FL** **Fluency with operations and estimation**

ALGEBRA

- **PA** **Patterns, relations, functions, and change**
- **RP** **Representation**
- **FO** **Formulas, expressions, equations, and inequalities**

MEASUREMENT

- **UN** **Units and systems of measurement**
- **TE** **Techniques and formulas for measurement**
- **PS** **Problem solving involving measurement**

GEOMETRY

- **GS** **Geometric shape, properties, and mathematical arguments**
- **LO** **Location and spatial relationships**
- **SR** **Spatial reasoning and geometric modeling**
- **TR** **Transformation and symmetry**

DATA AND PROBABILITY

- **RE** **Data representation**
- **AN** **Data interpretation and analysis**
- **PR** **Probability**